

# OTIS

## Without Attendant

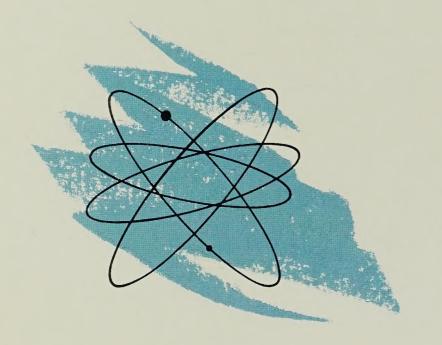
## ELEVATORS

BETTER ELEVATORING IS THE BUSINESS OF



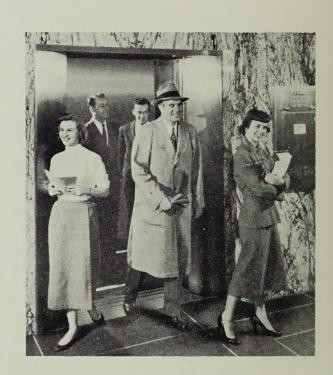
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## OTIS Without Attendant



Otis "Without Attendant" elevators are automatic electronic elevators coordinated by a group supervisory control system to give maximum quantity and quality of service.



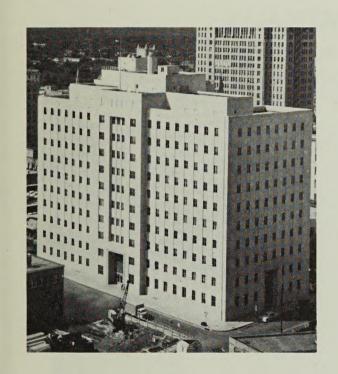


Otis "Without Attendant" elevators have been in successful operation since 1950. They are meeting the demands of heavy traffic in new and modernized buildings across the country. Office buildings, hospitals, hotels—buildings large and small—are benefiting from the economic advantages of these new automatic electronic elevators.

### ELEVATORS



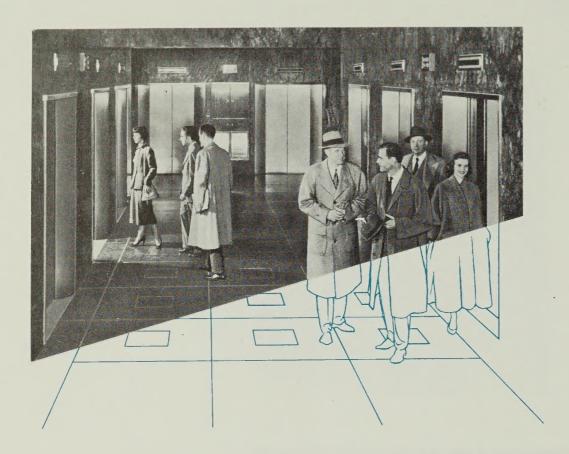






Otis "Without Attendant" elevators offer the most attractive saving in building operation that is available today. Savings on elevator attendant costs permit rapid amortization of the elevator investment.

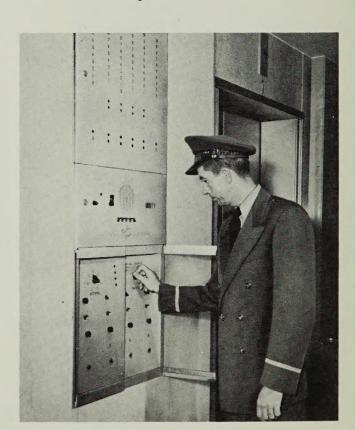
## HOW Without Attendant



#### **ELEVATOR GROUP SUPERVISED AUTOMATICALLY**

Elevator supervisor merely turns traffic flow dial to select operating program; then group operates automatically.\*

- > non-sequence dispatching selects next car to leave
- main floor signals attract passengers to the next car to leave
- > cars leave terminals on automatically adjusted intervals
- > cars prevented from bunching
- > late cars forced to make up lost time.



<sup>\*</sup>Automatic program selection is available as an optional feature.

### ELEVATORS HANDLE HEAVY BUILDING TRAFFIC

#### **CARS OPERATE AUTOMATICALLY**

Passengers simply press buttons for the floors they want; then cars operate automatically.

- > cars accelerate and decelerate rapidly but smoothly
- power operated doors start to open as car levels into landing
- > multiple door open timing keeps doors open slightly longer for hall button stops than for car button stops
- load weighing device operates to cause a substantially filled car to run express, stopping only for car calls and to cause a substantially filled car to be dispatched ahead of time from a terminal.





electronic detectors give doors a "sense of distance," cause doors to stop and reopen only when nearing a passenger in their path

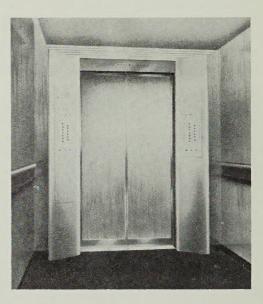
## HOW Without Attendant





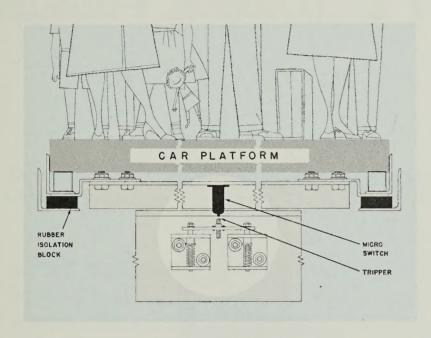
In the lobby, illumination of a "THIS CAR UP" hall lantern attracts passengers to next car to leave. As passengers enter car they press buttons on the car operating panel for floors desired. At the end of a dispatching interval the doors close, lantern signal goes out and car starts its trip. The "THIS CAR UP" signal for car selected as next to leave is immediately illuminated.

On cars with center opening doors, two car operating panels are suggested. Panel shown on left contains the extra controls necessary for with attendant operation.



The elevator accelerates, "thinks ahead" to its next stop, lights a directional hall signal in advance of its landing stop, slows down and starts to open its doors while leveling smoothly into the landing—all automatically. If a car is substantially filled it runs "express." Operation of its load weighing device causes the car to by-pass hall calls, but not car calls, until the load in the car is reduced sufficiently to take on more passengers.

### ELEVATORS OPERATE

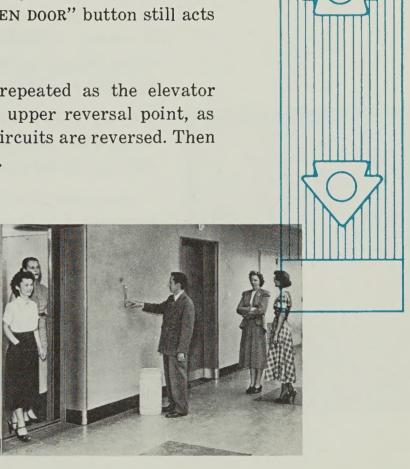


A car that becomes loaded quickly is dispatched ahead of time thru the operation of a load weighing device.

At a landing, elevator doors remain open long enough to permit passenger transfer and then close automatically. Doors stop and reopen if a passenger enters the electronic detector's field of influence. If a car is at a landing, pressure on the "OPEN DOOR" button in the car will also stop and reopen the doors. If a passenger delays door closing beyond a reasonable time, a loud buzzer sounds in the car, the doors proceed to close at a greatly reduced speed and gently but firmly nudge the passenger out of the entrance. However, pressure on "OPEN DOOR" button still acts to stop and reverse the doors.

The sequence of stopping and starting operations is repeated as the elevator answers the car and hall calls. When elevator reaches its upper reversal point, as determined by group supervisory system, its directional circuits are reversed. Then when the doors close, the elevator starts its "down" trip.

Waiting passengers call these automatic electronic elevators by touching an "up" or "down" electronic touch button at their landing. The mere touch of a fingertip registers the call and automatically stops the first available car.





## OTIS Without Attendant



#### MINIMIZE THE HUMAN ELEMENT

The elevators operate automatically. The only passenger actions necessary are the touching of electronic hall buttons and pressing of car buttons. Touching a hall button stops the first available car. Pressing a car button stops the car at floor desired by the passenger. Automatic devices supply the skill and judgment formerly required of the expert attendant.

The elevator group operates on automatic programs that match elevator service to traffic demands. Interval adjustments are automatic and as an optional feature automatic program selection is available.

#### MAINTAIN HIGH SPEED, INTENSIVE SERVICE

An automatic group supervisory system makes time and space decisions for the elevators as a group — keeps car movements related to traffic demands.

A car that fills quickly at a terminal leaves immediately. A late car does not hold up other cars; either it makes up lost time, or other cars pass it and automatically take its place in the dispatching sequence. When required by traffic demands, a car that has answered its highest call is automatically reversed and instantly dispatched to the lower terminal.

### ELEVATORS

Automatic control insures precision car operation, guarantees proper distribution of service, eliminates unnecessary stops and unnecessary delays.

#### SOLVE THE LIGHT AND INTERMITTENT TRAFFIC PROBLEM

When traffic is light, two selected elevators are operated on the Intermittent program. One car parks at a mid-floor and responds to upper floor traffic, while the other car parks at the lower terminal and responds to lower terminal and basement calls. Both cars park with doors closed.

However, if traffic increases beyond capacity of the two cars, a program switchover occurs. Then, all of the cars in the group (or as many as desired) are automatically dispatched on the "Up-Down" program. A traffic decrease is followed by a return to the two car Intermittent program. This program switchover is completely automatic.

#### PERMIT EASY CHANGE TO ATTENDANT OPERATION

Should attendant operation be desired it is only necessary to unlock the lower portion of car operating panel and to operate a key switch on the supervisor's control panel.

The car attendant has full control over door closing and car starting. He may, if the need arises, by-pass hall calls or reverse direction of car travel.

Provision is made so that any one or more cars can be removed from group operation for independent service with an attendant. Removal of a car or cars for independent service does not interfere with normal operation of remaining cars in the group.

#### **CREATE TENANT ENTHUSIASM**

Participation in elevator operation gives passengers a feeling of independence and importance. They push buttons for one another — tell new riders what to do. Acceptance of Otis automatic electronic elevators comes naturally.

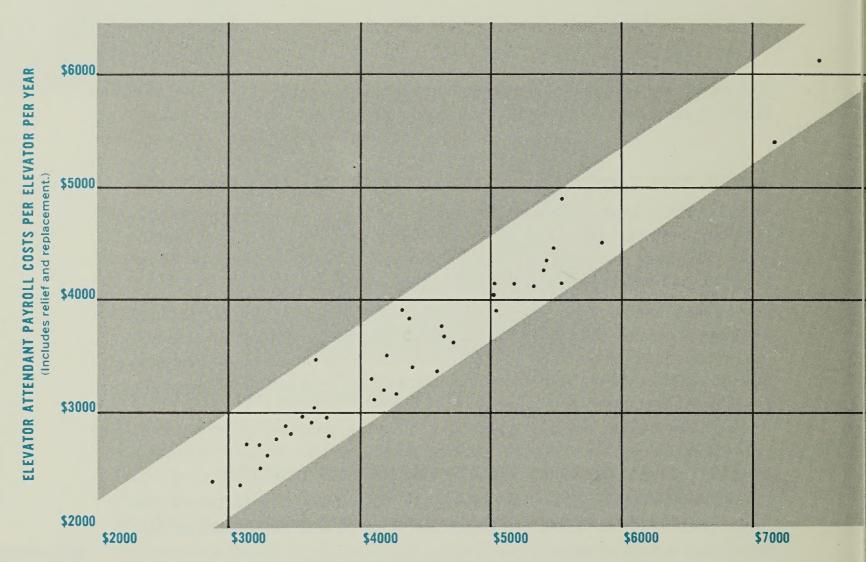


#### **SAVE UP TO \$7,000 PER CAR PER YEAR**

Costs run high for elevators operated by attendants. Wages — a not entirely predictable factor — contribute most to costs. But, also contributing are employee benefits, social security taxes, cleaning and replacement of uniforms, locker room facilities, hiring, training and supervision. As indicated on the graph below, these items can raise the total cost of attendant operation considerably.

Dots on graph indicate office building, elevator attendant cost averages in 40 cities across the country. To approximate annual total cost of attendant operation of one of your elevators:

- First, divide your annual payroll for attendants by the number of elevators in operation;
- Then, spot the resulting figure on graph's vertical scale, read across into white band and down to horizontal scale;
- The figure read off this scale approximates your total cost of attendant operation of one elevator for one year.



TOTAL COST ATTENDANT OPERATION PER ELEVATOR PER YEAR (Includes wages and all other costs connected with attendant operation.)

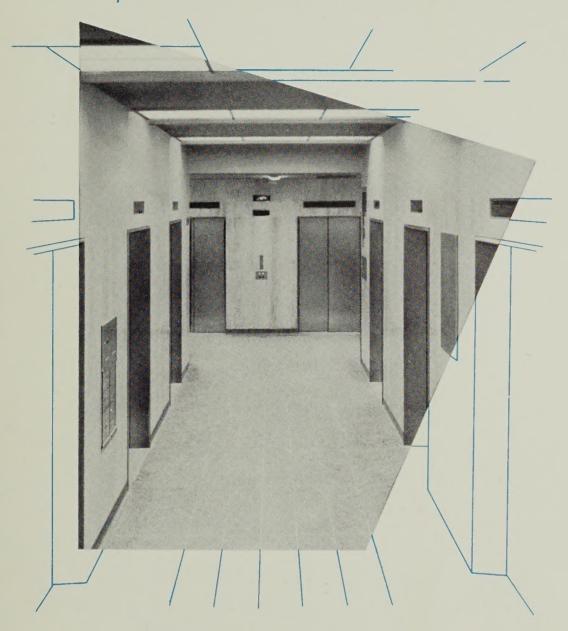
#### **WORK TO BUILDING MANAGEMENTS' INTERESTS**

Reduction of operating costs allows rapid amortization of the elevator investment. Buildings served by automatic electronic elevators are in a strong competitive position.

Employee relation problems are lessened. A full complement of elevators is always ready to meet the demands of peak traffic. Untiring service is given all day long.

### THE IMPORTANCE OF

## Without Attendant ELEVATORS



Both new and modernized buildings benefit from the use of automatic electronic elevators — operating costs are reduced and the human element is minimized. Automatic elevators offer about the only substantial saving in building operation that is available today. Office buildings, hospitals, hotels — large and small buildings—can realize the benefits of automatic electronic elevators.

Should your immediate plans call for attendant operation of your elevators, you can install automatic elevators and include the "with attendant" feature. The additional cost of automatic electronic elevators is a small premium to pay for the insurance of having all elevators ready for service at all times.

### OTIS ELEVATOR COMPANY

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